RESOURCE EXTRACTION

COAL PRODUCTION

Indicator 1. Coal Production and Consumption

Background Kentucky's coal resources not only help to meet national and state energy needs, they also contribute to state and local economies. During 1999, the market value of coal mined in the state was approximately $32.4 billion. That year the coal industry employed 17,264, earning $749 million in wages.[1]

Since 1790, 8.1 billion tons of coal have been mined in Kentucky.[2] The Kentucky Geologic Survey (KGS) estimates that there are 95 billion short tons of coal reserves remaining in the state.[3] KGS estimates that less than 50 percent of this total is recoverable given current mining methods and land use restrictions.[4] However, the Energy Information Administration estimates that there are 32 billion short tons of coal reserves in Kentucky. The Energy Information Administration estimates 28.6 billion short tons would actually be mineable.[5]

Coal has been mined in Kentucky during the past 200 years and is found in two regions of the state—the Eastern Kentucky Coalfield and the Western Kentucky Coalfield. In 1999, 79 percent of the coal extracted in the state was mined in the Eastern Kentucky Coalfield. This coalfield contains 45 mineable beds.[6] The average heat content of the coal is about 13,000 Btu per pound with a sulfur content of 1 to 2 percent.[7] In the Western Kentucky Coalfield, there are 10 mineable coalbeds. The heat content is slightly lower than in the eastern field and the sulfur content is higher at about 3 to 4 percent.[8]

At a Glance

Coal mined (tons)
total to date 8.1 billion
1999 . . . . . 144 million

Remaining coal reserves (tons)
total . . . . .32-95 billion
mineable . . 28-47 billion

Coal mined by region (tons) (2000)
East Ky. . . . .105 million
West Ky. . . . 27 million

The Eastern Kentucky Coalfield has become the state's primary source of coal production. Four counties (Pike, Knott, Martin, Perry) accounted for 40 percent of the coal mined in Kentucky in 1999 (144 million short tons). Pike County remains the leading coal producer in the state with 35.7 million tons mined in 1999 (25 percent of the coal output in the state).

Goal Foster the conservation and efficient recovery of coal resources while protecting health, safety and the environment.

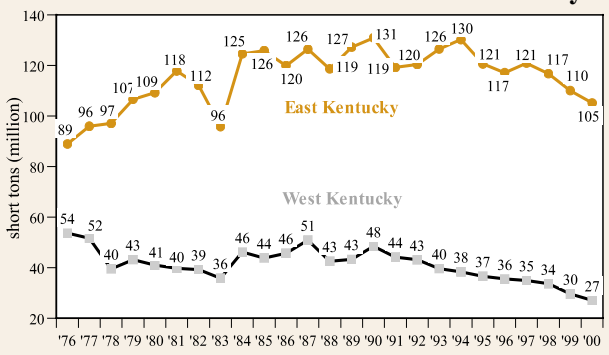
Progress Nationwide coal production increased 23 percent between 1986 to 1999.[9] In Kentucky, long-term coal production trends have remained fairly constant since 1984. However, during the past year, trends reveal an 8 percent drop in coal production levels in the state. Statewide coal production has declined primarily in response to competition from Western states, where the coal is easier and less costly to mine, lower in sulfur content and more plentiful.

Trends reveal a 35 percent decline in coal mined in western Kentucky between 1990 and 1999. This is because western Kentucky coal is higher in sulfur content, making it less desirable to power plants that are working to reduce sulfur dioxide emissions as required under the Clean Air Act Amendments of 1990. Kentucky coal, however, is expected to remain strong in the marketplace due to its high Btu heat content,

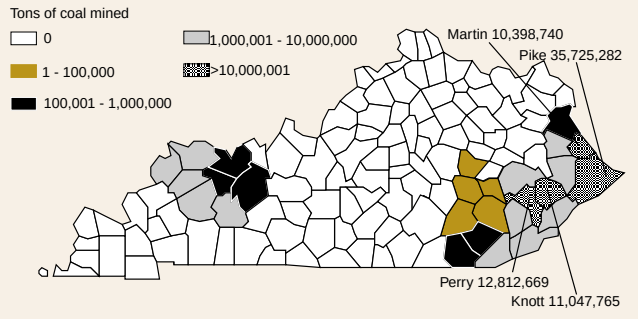
Measure 3. Top 10 Coal Producing States

State	Million short tons 1996	1999
WY	278	334
WV	170	156
KY	159	144
PA	68	76
TX	55	53
MT	38	41
IL	47	40
IN	30	34
ND	30	30
NM	24	30

Measure 1. Coal Production in Kentucky



Measure 2. Coal Production in Kentucky (1999)



Coal Production

relatively low price and increasing demand brought on by higher natural gas prices due to deregulation. Coal energy consumption levels at the national level increased 16 percent between 1984 and 1998. In Kentucky, coal consumption has far exceeded the national average and increased 34 percent between 1984 and 1999, primarily in response to economic growth and increasing demand for electricity.

The majority of the coal produced in Kentucky is consumed by coal-fired power plants. Kentucky power plants reported consuming 34.46 million short tons of coal in 1999, according to the Kentucky Division for Air Quality. Coal fuels 95 percent of all electric power generated in the state.[10] In 1998, the average price paid for Kentucky coal by power plants was $24.52 per short ton compared to the national average of $25.64. That year, Kentuckians paid $.056 per kilowatt-hour for electricity—the third-lowest rate in the country. But cold winters and skyrocketing natural gas prices combined with growing energy demand have led to recent price hikes for coal. Industry leaders reported in January 2001 that some spot-market coal prices had jumped from $18 per ton six months ago to between $48 and $55 a ton. A weekly price survey in the Jan. 29, 2001, edition of the trade publication *Coal Outlook* showed high-quality spot-market coal loaded at the Big Sandy River docks bringing an average of $37 a ton. Coal production is expected to increase in Kentucky due to rising prices and increased demand.

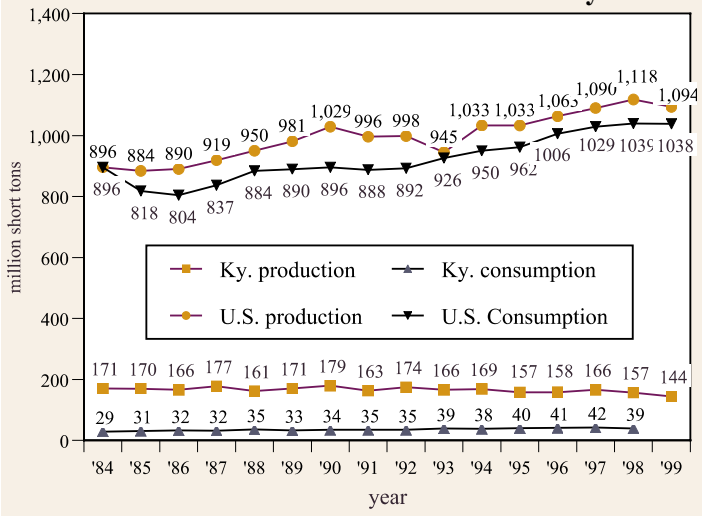
Measure 4. Coal Reserve Base Top 10 Producing States 1997

State	million short tons
WY	67,814
WV	35,397
KY	**32,040**
PA	28,646
TX	12,931
MT	119,676
IL	105,069
IN	9,916
ND	9,395
NM	12,483
U.S.	**507,739**

Measure 5. Price of Coal Delivered to Electric Utilities in 1999

State	Average $
ND	$9.60
MT	$12.23
WY	$13.48
TX	$18.26
IN	$23.59
NM	$24.49
KY	**$24.52**
IL	$28.15
WV	$29.35
PA	$33.00
U.S.	**$25.64**

Measure 6. Coal Production/Consumption in the United States and Kentucky



Footnotes

1. Coal Industry Annual, 1999, U.S. Energy Information Adm.
2. Coal Occurrence in Kentucky, Ky. Geological Survey, Web site - http://www.uky.edu/KGS/coal/webcoal/pages/coaloccurrences.html.
3. U.S. Coal Profile: Kentucky 1997, U.S. Energy Information Adm.
4. Ibid.
5. Kentucky Coal Production 1790-1999, Ky. Geological Survey, Web site - http://128.163.49.71/pub/web/wrs/KYCOAL99.htm.
6. Available Coal Resources in Eastern and Western Kentucky, Ky. Geological Survey, Web site - http://www.uky.edu/KGS/coal/webcoal/pages/coal/availab.htm, September 2000.
7. Coal Occurrence in Kentucky, Ky. Geological Survey, Web site - http://www.uky.edu/KGS/coal/webcoal/pages/coaloccurrences.html
8. Demonstrated Reserve Base of Coal by State, Table 8, Energy Information Administration, 1997.
9. Kentucky Coal Facts 1999-2000, page 5, Kentucky Coal Association, December 1999.
10. U.S. Energy Information Administration, Web site - http://www.eia.doe.gov/cneaf/electricity/st_profiles/kentucky/ky.html.

Measures - notes and sources

Measure 1. *Source: U.S. Energy Information Adm.*
Measure 2. *Source: Ky. Department of Mines and Minerals.*
Measure 3. *Source: U.S. Energy Information Adm.*
Measure 4. *Demonstrated reserve base. 1997 most recent data available. Includes anthracite, bituminous, subbituminous and lignite coal. Source: U.S. Energy Information Adm.*
Measure 5. *Source: U.S. Energy Information Adm.*
Measure 6. *Does not include consumption by independent power producers. Source: Ky. Geological Survey, U.S. Energy Information Adm., Ky. Department of Mines and Minerals.*